Monthly Progress Report

REC'D 10-2-92
F.B.

NAME: Ciba Geigy
I.D. NO.: RIDOO1154323
FILE LOC: R-9
OTHER:

Submitted to: Mr. Frank Battaglia, Project Manager
USEPA Region I
Waste Management Building
90 Canal Street
Boston, MA 02114

Submitted by: Ms. Diane Leber, Project Coordinator
CIBA-GEIGY Corporation
444 Sawmill River Road
Ardsley, NY 10502

Pursuant to: RCRA I-88-1088

Facility Site: Cranston, RI

Period Covered: September 1992 (29 August 1992 – 25 September 1992)*

Date Submitted: 10 October 1992

1.0 SUMMARY

This is the twenty-seventh monthly progress report. Five significant events occurred this month.

Hydrological Investigation. Stage height measurements of the river continued. Analysis of the routine (weekly) water column monitoring samples (collected at the six sampling stations) for selected analytes was completed. A riverbed sediment sampling procedure and plan (to determine the effects of compositing the sediment samples) was developed and submitted to the USEPA on 9/21/92. Additional information (requested by the USEPA on 9/9/92) about the sampling strategy for river modeling was provided by HydroQual.

Water Level Monitoring. Monthly groundwater level monitoring continued.

Stabilization Investigation. The Stabilization Work Plan was completed on 8/30/92 and submitted to the USEPA on 9/8/92. Construction of the pilot waste water pretreatment system began on 9/8/92. Step-drawdown tests were conducted on recovery wells RC-1 and RC-2, and samples of the groundwater pumped were submitted for TCLP analysis; the results (presented in Attachment A) indicated that no analytes exceeded TCLP limits, so the groundwater is not considered to be a characteristic hazardous waste. In order to meet POTW requirements, representatives of the Cranston POTW visited the site on 9/3/92 to inspect equipment and review the proposed sampling plan. Other planning for stabilization continued.

Health and Safety Assurance. A Health and Safety Plan was developed for the operation of the pilot pretreatment system. The plan (which includes Hazard Communication Training) was presented at the site to the pretreatment system operators on 9/24/92.

Project Management. A meeting with personnel from the USEPA, CIBA-GEIGY, HydroQual, IT Corporation, and Woodward-Clyde Consultants was held at USEPA Region I offices on 9/9/92 to present and discuss in more detail the strategy and schedule for the Phase II Pawtuxet River investigation. The Modification to the Order to implement stabilization measures at the facility was executed by CIBA-GEIGY on 9/22/92.

*As agreed, the reporting period will be monthly through the fourth Friday of the month.

2.0 TASKS AND ACTIVITIES COMPLETED

The sampling and other activities (subtasks) that were completed are reported here.

2.1 Sampling Activities Completed

One other groundwater sample was collected:

Sampling Activity	Location(s)	Date(s) Sampled	No. of Samples	Date(s) Sent for Analysis	Analysis
Groundwater Sampling	RC-1	9/23	1	9/23	C*

* C = chemical analyses included volatile organic compounds (Method 624) and selected metals required for the Cranston POTW.

2.2 Other Activities Completed

The other activities (subtasks) completed during this reporting period were described in Section 1.0.

3.0 JEOPARDY TASKS (scheduled tasks not completed)

No tasks were in jeopardy as of 25 September 1992.

4.0 OTHER TASKS UNDERWAY (and on schedule)

The tasks that were underway (and on schedule as of 25 September 1992) were described in Section 1.0.

5.0 DATA OBTAINED

Groundwater level data have been obtained but have not yet been peer reviewed. Continuous groundwater level data from the automatic recorders (transducers) were downloaded but have not yet been processed. Stage height measurements of the river were obtained on 9/3/92; the data have not yet been peer reviewed. Analytical data from routine water column sampling were received but have not yet been peer reviewed; analytical data from groundwater sampling of the newly installed wells in the Production Area were received but have not yet been validated. Results from TCLP analyses of groundwater samples pumped during the step-drawdown tests were received; these data are presented in Attachment A.

6.0 PROBLEM AREAS

The resolved, new, potential (i.e., anticipated or possible), and outstanding (i.e., still unresolved) problem areas are reported here.

6.1 Resolved Problem Areas

Two potential problem areas were resolved during this reporting period.

Equipment Vendor Delayed Delivery of Pretreatment System

Review of the Problem. The primary equipment vendor for the groundwater pretreatment system was scheduled to deliver the necessary equipment in August; in August, the vendor notified CIBA-GEIGY that the equipment would not be delivered before November.

Resolution. Other vendors were able to supply the equipment needed; the schedule for installing and starting operation of the pilot pretreatment system was delayed by about 2 weeks.

An Emergency Permit or Exemption May Be Needed to Pretreat Groundwater

Review of the Problem. During aquifer testing, groundwater might be considered to be a characteristic hazardous waste. If so, either an emergency permit will be needed to pretreat the groundwater, or CIBA-GEIGY must qualify for an exemption.

Resolution. Groundwater generated during the step-drawdown tests was sampled and analyzed for TCLP. The results indicated that no analytes exceeded TCLP limits, so the groundwater is not considered to be a characteristic hazardous waste and CIBA-GEIGY will not need to obtain an emergency permit nor qualify for an exemption from RIDEM and/or the USEPA. However, this analysis delayed the schedule for this stabilization activity by about 2 weeks.

6.2 New Problem Areas

No new problem areas were identified during this reporting period.

6.3 Potential Problem Area

One potential problem area was identified during this reporting period.

A Gravel Unit in the Production Area May Require Modifying Recovery Well RC-1

Review of the Problem. A gravel unit was encountered (from about 8 to 12 feet below grade) during installation of recovery well RC-1. It is believed that, because of this gravel unit, well RC-1 generated more water than expected during the step-drawdown tests. For this reason, the design of RC-1 may need to be modified to increase the radius of influence of this well and to accommodate the design capacity of the pilot pretreatment system.

Plans for Resolution. Groundwater from the gravel unit was sampled and submitted for analysis of metals and volatile organic compounds. If the results indicate that the groundwater in this unit is not contaminated, the unit may be sealed off before conducting the 72-hour constant rate test on this well. Regardless of the analytical results, the schedule for this stabilization activity may be delayed.

6.4 Outstanding Problem Areas

No problem areas remained unresolved during this reporting period.

7.0 SCHEDULE OF TASKS (next two months)

The projected schedule is provided here. It covers the tasks to be performed in the next two months (October and November 1992), along with other comments or considerations.

Target Date	Task#	Task	Comments/Considerations
ongoing	—	Stabilization	
ongoing	9	Project Management	
ongoing	10	Data Management	
ongoing	11	Project Administration	
ongoing	12	Quality Assurance	
ongoing	13	Health & Safety Assurance	

8.0 CHANGES IN WORK PLAN

No changes were made to the Work Plan during this reporting period.

9.0 OTHER COMMENTS

The plans going forward into October and November include:

- validating the groundwater analytical data,
- operating the pilot pretreatment system,
- performing the dual-phase extraction pilot test at SWMU-11,
- sampling of sediments from the Pawtuxet River (to determine the effects of compositing the sediment samples),
- planning for stabilization activities, and
- additional planning for future investigations.

The following document is appended:

- Attachment A — Results of TCLP Analyses of Groundwater from Step-Drawdown Tests

ATTACHMENT A

Results of TCLP Analyses of Groundwater from Step-Drawdown Tests

CIBA-GEIGY Facility
Cranston, Rhode Island

CIBA-GEIGY CORPORATION

ENVIRONMENTAL TESTING LABORATORY

TOMS RIVER, NEW JERSEY

CLIENT NAME:	CIBA-GEIGY Corporation Cranston, Rhode Island
PROJECT NAME:	EQTNK-1
PROJECT CODE:	RI-TCLP
CHARGE NUMBER:	CLA-61
REPORT NUMBER:	92E-0611
REPORT DATE:	23-Sep-92

John Rissel
Laboratory Director

REPORT NUMBER: 92E-0611
23-Sep-92

CIBA-GEIGY CORPORATION
ENVIRONMENTAL TESTING LABORATORY

Definitions

ND Not detected at or above method detection limit.

J Detected but below method detection limit.

B Analyte detected in blank but not corrected for amount in blank.

Method Detection Limit Lowest concentration (amount) that must be present before a reliable and recognizable response is observed for that method of analysis.

When a sample has been diluted, the Method Detection Limit has been multiplied by the dilution factor.

Methodology

TCLP extracts were prepared in accordance with Toxicity Characteristics Revisions; Final Rule, 40 CFR 261, March 29, 1990.

Volatile organic analyses were performed in accordance with Method 8240, SW-846, EPA Test Methods for Evaluating Solid Wastes, 3rd edition.

Semivolatile organic analyses were performed in accordance with Method 8270, SW-846, EPA Test Methods for Evaluating Solid Wastes, 3rd edition.

Pesticides analyses were performed in accordance with Method 8080, SW-846, EPA Test Methods for Evaluating Solid Wastes, 3rd edition.

Herbicide analyses were performed in accordance with Method 509B, Standard Methods for the Examination of Water and Wastewater, 15th edition.

ICP metals analyses were performed in accordance with Method 200.7, 40 CFR 136.

Furnace metals and inorganics analyses were performed in accordance with EPA Test Methods for the Chemical Analysis of Water and Wastes.

REPORT NUMBER: 92E-0611

23-Sep-92

CIBA-GEIGY CORPORATION

ENVIRONMENTAL TESTING LABORATORY

Laboratory Chronicle

Sample #	Sample Description	Date Sampled	Date Received
92090288	EQTNK-1	9/11/1992	9/12/1992

Sample #	Sample Description	Parameter	Date Extracted
92090288	EQTNK-1	TCLP-ALL	9/15/1992
		Semivolatiles-TCLP	9/15/1992
		Pesticides-TCLP	9/15/1992
		Herbicides-TCLP	9/16/1992

Sample #	Sample Description	Parameter	Date Analyzed
92090288	EQTNK-1	Volatiles	9/17/1992
		Semivolatiles	9/21/1992
		Pesticides	9/17/1992
		Herbicides	9/17/1992
		Total Mercury TCLP	9/15/1992
		Total Barium TCLP	9/16/1992
		Total Cadmium TCLP	9/16/1992
		Total Chromium TCLP	9/16/1992
		Total Silver TCLP	9/17/1992
		Total Arsenic TCLP	9/15/1992
		Total Lead TCLP	9/15/1992
		Total Selenium TCLP	9/15/1992

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ENVIRONMENTAL TESTING LABORATORY

TCLP REGULATORY LEVELS

PARAMETER	MAXIMUM CONC. LIMITS
Vinyl chloride	200
1,1-Dichloroethene	700
2-Butanone	200000
Chloroform	6000
Carbon tetrachloride	500
1,2 Dichloroethane	500
Trichloroethene	500
Benzene	500
Tetrachloroethene	700
Chlorobenzene	100000
1,4-Dichlorobenzene	7500
Total Cresols	200000
Hexachloroethane	3000
Nitrobenzene	2000
Hexachlorobutadiene	500
2,4,6-Trichlorophenol	2000
2,4,5-Trichlorophenol	400000
2,4-Dinitrotoluene	130
Hexachlorobenzene	130
Pentachlorophenol	100000
Pyridine	5000
Gamma BHC (Lindane)	400
Chlordane	30
Endrin	20
Heptachlor	8.0
Heptachlor Epoxide	8.0
Toxaphene	500
Methoxychlor	10000
2,4-D	10000
2,4,5-TP(Silvex)	1000
Barium	100000
Cadmium	1000
Chromium	5000
Arsenic	5000
Lead	5000
Selenium	1000
Silver	5000
Mercury	200
	(ug/L)

REPORT NUMBER: 92E-0611
23-Sep-92

CIBA-GEIGY CORPORATION
ENVIRONMENTAL TESTING LABORATORY

TCLP Matrix Spike Corrected Results

Volatiles

EQTNK-1 Parameter	92090288	Method Detection Limit	Units
Vinyl chloride	ND	91	ug/L
1,1-Dichloroethene	ND	45	ug/L
2-Butanone	ND	900	ug/L
Chloroform	ND	45	ug/L
Carbon tetrachloride	ND	45	ug/L
1,2-Dichloroethane	ND	45	ug/L
Trichloroethene	ND	45	ug/L
Benzene	ND	45	ug/L
Tetrachloroethene	ND	45	ug/L
Chlorobenzene	ND	45	ug/L

Semivolatiles

EQTNK-1 Parameter	92090288	Method Detection Limit	Units
1,4-Dichlorobenzene	ND	150	ug/L
Total Cresol	ND	85	ug/L
Hexachloroethane	ND	150	ug/L
Nitrobenzene	ND	150	ug/L
Hexachlorobutadiene	ND	150	ug/L
2,4,6-Trichlorophenol	ND	85	ug/L
2,4,5-Trichlorophenol	ND	85	ug/L
2,4-Dinitrotoluene	ND	150	ug/L
Hexachlorobenzene	ND	150	ug/L
Pentachlorophenol	ND	260	ug/L
Pyridine	ND	310	ug/L

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ENVIRONMENTAL TESTING LABORATORY

TCLP Matrix Spike Corrected Results

Pesticides

EQTNK-1 Parameter	92090288	Method Detection Limit	Units
Gamma BHC(Lindane)	ND	0.065	ug/L
Heptachlor	ND	0.072	ug/L
Heptachlor epoxide	ND	0.11	ug/L
Endrin	ND	0.092	ug/L
Methoxychlor	ND	0.79	ug/L
Chlordane	ND	1.9	ug/L
Toxaphene	ND	4.1	ug/L

Herbicides

EQTNK-1 Parameter	92090288	Method Detection Limit	Units
2,4-D	ND	1.3	ug/L
2,4,5-TP(Silvex)	ND	0.76	ug/L

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TCLP Matrix Spike Corrected Results

Metals

EQTNK-1 Parameter	92090288	Method Detection Limit	Units
Total Mercury	ND	42	ug/L
Total Barium	93	56	ug/L
Total Cadmium	ND	82	ug/L
Total Chromium	200 J	1100	ug/L
Total Silver	ND	9.1	ug/L
Total Arsenic	ND	120	ug/L
Total Lead	ND	50	ug/L
Total Selenium	ND	79	ug/L

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Surrogates

EQTNK-1 Parameter	92090288 % Recovery	QC Limits
1,2-Dichloroethane-d4	111	76 to 114
Toluene-d8	96	88 to 110
4-Bromofluorobenzene	104	86 to 115
2-Fluorophenol	54	21 to 100
Phenol-d6	51	10 to 94
Nitrobenzene-d5	64	35 to 114
2-Fluorobiphenyl	73	43 to 116
2,4,6-Tribromophenol	90	10 to 123
Terphenyl-d14	70	33 to 141
Dibutylchlorendate	153	24 to 154
2,4,5-T	69	30 to 128

CERTIFIED LAB # 15265
CERTIFIED LAB # 297
CERTIFIED LAB # 40490
THER CERTIFICATION :

CORPORATE ENVIRONMENTAL TESTING LABORATORY
ROUTE 37 W
TOMS RIVER, NJ 08754
(908) 349-5200 or (800) 962-6933
FAX (908) 505-9195

CIBA-GEIGY

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HADED AREA
OR ETL USE ONLY

INFORMATION PROVIDED BY CLIENT

SAMPLING INFORMATION

ROJECT CODE: T-TCLP

Sampled by: KENNETH A. KIEVIT Signature:

Plant Site: CRANSTON, RI

JE DATE: IKS

Title: TECHNICIAN

Company: WOODWARD-CLYDE

Division:

Area/ Bldg.

VOICE TO: A-61

Phone #: (201) 785 - 0700

Ext:

Charge #: CLA-61

CONTAINER TYPE, SIZE / PRESERVATIVE

SAMPLE NO.	DATE	TIME	MATRIX	SAMPLE DESCRIPTION	TEST / COMMENTS	# OF BOTTLES	950ML UNPRE SERVE GLASS	250ML UNPRE SERVE GLASS SEPTA
92090288	9-11-92	1430	WATER	EQTNK-1	TCLP	7	6	1

STODY SEAL INTACT? (Y) N N/A
MPLES COLD? (Y) N N/A
MPLES PRESERVED? (Y) N N/A
ADSPACE IN VOA'S? Y (N) N/A
A TEFLON SIDE DOWN? Y N N/A
MMENTS:

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY:(Signature)	DATE:	TIME:
	9-11-92	1900		9-14-92	0600
RECEIVED BY:(Signature)			REMARKS: JOB NUMBER: 92J-0611	PROJECT REQUEST #: 1112	
RELINQUISHED BY:(Signature)			TCLP Received 9/12/92 By Swift Super.		
RECEIVED BY:(Signature)			SAMPLES KEPT IN (REFRIG) COOLER OVER WEEKEND		

NJ CERTIFIED LAB # 15265
NC CERTIFIED LAB # 297
AL CERTIFIED LAB # 40490
OTHER CERTIFICATION :

CORPORATE ENVIRONMENTAL TESTING LABORATORY

ROUTE 37 W
TOMS RIVER, NJ 08754
(908) 349-5200 or (800) 962-6933
FAX (908) 505-9195

CIBA-GEIGY

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SHADED AREA FOR ETL USE ONLY	INFORMATION PROVIDED BY CLIENT: SAMPLING INFORMATION						CONTAINER TYPE, SIZE / PRESERVATIVE					
PROJECT CODE: R1-TCLP	Sampled by: R TAPP		Signature: R Tapp		Plant Site:		OT	500mL	250mL	250mL/HNO3	40mL VOA/HCl	10mL VOL
DUE DATE:	Title: LAB TECH		Company: CIBA GEIGY		Division:	Area/ Bldg.						
INVOICE TO: CLA-61	Phone #: ( ) -		Ext: 2474		Charge #:							
SAMPLE NO.	DATE	TIME	MATRIX	SAMPLE DESCRIPTION	TEST / COMMENTS	# OF BOTTLES						
92090288	9-15-92		AQ	TCLP		6	2	1		1	2	
92090331	9-15-92		AQ	TCLPMS SA.92090288 (92J-0611)		5			2	1	1	1

CUSTODY SEAL INTACT? Y N N/A	RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY:(Signature)	DATE:	TIME:
SAMPLES COLD? (Y) N N/A	R Tapp	9-15-92	9:30	Ed Applegate	9-15-92	09:30
SAMPLES PRESERVED? (Y) N N/A	RECEIVED BY:(Signature)			REMARKS:		
HEADSPACE IN VOA'S? Y N (N/A)						
VOA TEFLON SIDE DOWN? (Y) N N/A	RELINQUISHED BY:(Signature)					
COMMENTS:	RECEIVED BY:(Signature)					